

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312896

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-CA125-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L83050-S-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2045.0 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

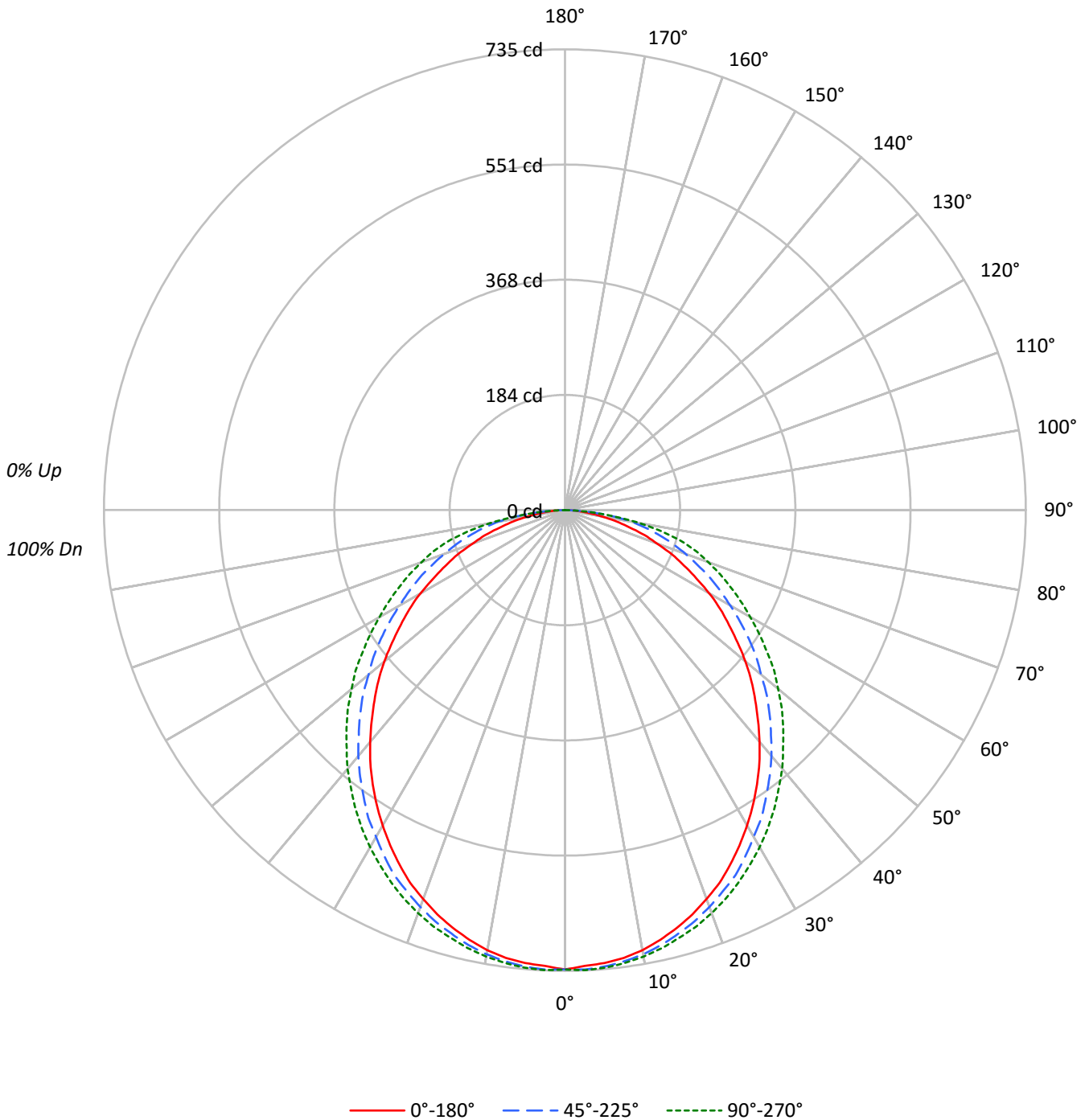
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1972	1972	1972
5°	1959	1974	1979
10°	1948	1966	1976
15°	1922	1948	1967
20°	1891	1929	1959
25°	1853	1909	1946
30°	1806	1871	1930
35°	1755	1837	1912
40°	1696	1800	1894
45°	1634	1757	1874
50°	1574	1710	1858
55°	1499	1679	1844
60°	1433	1638	1838
65°	1337	1628	1859
70°	1231	1614	1914
75°	1111	1637	2014
80°	961	1686	1892
85°	797	1414	1414



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	3.4
10°-20°	197.2	9.6
20°-30°	295.1	14.4
30°-40°	349.4	17.1
40°-50°	356.1	17.4
50°-60°	319.2	15.6
60°-70°	249.9	12.2
70°-80°	161.1	7.9
80°-90°	47.6	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	561.6	27.5
0°-40°	911.0	44.5
0°-60°	1586.3	77.6
0°-90°	2045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2045.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	733	733	733	733	733	
5°	725	727	731	732	733	69
15°	690	694	699	705	706	195
25°	624	630	643	652	656	287
35°	534	541	559	576	582	334
45°	429	439	462	486	492	332
55°	320	330	358	383	393	287
65°	210	222	256	280	292	209
75°	107	123	157	184	194	115
85°	26	35	46	46	46	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	732.8	732.8	732.8	732.8	732.8
2.5°	728.0	729.9	733.7	734.7	734.7
5°	725.2	727.1	730.9	731.8	732.8
7.5°	720.4	721.3	726.1	728.0	729.0
10°	712.8	714.7	719.4	722.3	723.2
12.5°	702.3	705.1	710.8	714.7	715.6
15°	689.9	693.7	699.4	705.1	706.1
17.5°	676.5	680.3	687.9	694.6	696.5
20°	660.3	665.0	673.6	681.3	684.1
22.5°	644.1	647.9	658.4	667.9	670.8
25°	624.0	629.7	643.1	651.7	655.5
27.5°	603.0	609.7	623.1	634.5	638.3
30°	581.1	587.8	602.1	616.4	621.2
32.5°	558.2	565.8	583.0	597.3	602.1
35°	534.3	541.0	559.1	576.3	582.0
37.5°	509.5	515.2	536.2	554.4	560.1
40°	482.8	490.4	512.4	533.4	539.1
42.5°	456.1	464.7	486.6	509.5	515.2
45°	429.4	438.9	461.8	485.7	492.3
47.5°	403.6	411.2	437.0	459.9	469.4
50°	375.9	383.6	408.4	434.1	443.7
52.5°	347.3	357.8	384.5	409.3	420.8
55°	319.6	330.1	357.8	382.6	393.1
57.5°	293.9	302.5	331.1	356.9	367.3
60°	266.2	273.8	304.4	332.0	341.6
62.5°	236.6	248.1	279.6	305.3	316.8
65°	209.9	222.3	255.7	280.5	292.0
67.5°	185.1	196.6	229.0	255.7	268.1
70°	156.5	171.7	205.1	231.9	243.3
72.5°	133.6	146.9	181.3	208.0	220.4
75°	106.9	123.1	157.4	184.2	193.7
77.5°	84.9	101.1	133.6	154.6	159.3
80°	62.0	78.2	108.8	119.3	122.1
82.5°	42.0	57.2	78.2	81.1	82.1
85°	25.8	35.3	45.8	45.8	45.8
87.5°	12.4	14.3	16.2	15.3	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)